Abstract
Title: Can probiotics prevent atopic dermatitis in children with high risk?
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Background Allergic disease is today common, this including atopic dermatitis, which is the most common inflammatory skin disease in the world. Heredity has been shown to play a major role in the development of this disease. It is therefore of high interest for both the individual and society to find effective methods for preventing atopic dermatitis in individuals with high risk profile. Probiotics are beneficial for the bacterial profile in the intestine and it is therefore of interest to study if they through their anti-inflammatory effect could prevent atopic dermatitis.

Objective The aim was to study whether administration of probiotics to the mother and the child (directly or via breast milk) could prevent atopic dermatitis in children with high risk profile (at least one first degree relative with a diagnosed allergic disease).

Search strategy A systematic literature search was done in databases PubMed and Scopus with search terms maternal, prenatal, probiotics, allergy, atopic dermatitis, prevention, and children.

Selection criteria Randomized, controlled human studies and original articles in English were included. Outcome was to be measured in atopic dermatitis.

Data collection and analysis Six original articles were obtained and reviewed by the SBU audit template. The strength of evidence was assessed using an evidence summary form.

Main results The studies were considered to have moderately high (n = 3) to high (n = 3) study quality. The three studies of high quality showed a significantly lower incidence of atopic eczema in children in the intervention group compared to children in the control group. The remaining three studies saw no significant difference between groups. The strength of evidence for the outcome was assessed as high (++++).

Conclusions There is high evidence that administration of probiotics to the mother and the child can prevent atopic dermatitis in children with high risk profile (+++).